C-4

Permit No.: IDG-131003

ANNUAL REPORT OF OPERATIONS FOR YEAR 2013 Idaho Aquaculture Permit

I. Facility Name: Dworshak National Fish Hatchery NPDES # IDG131003

Operator Name (*Permittee*): US Fish and Wildlife Service

Address: 276 Dworshak Complex Dr. Orofino, ID 83544 Phone: 208-476-4591

Fax: 208-476-3252 E-Mail: steven_rodgers@fws.gov

Owner Name: U.S. Army Corps of Engineers Phone: 509-527-7121

II. Annual Production: *Harvestable weight produced in the year* 502,178 pounds.

III. Food Used: *Number of pounds of food fed to the fish during the maximum month:* 63879 pounds

IV. Noncompliance Summary:

Include description & dates of noncompliance, the reasons for such incident, and the steps taken to correct the problem. Attach additional pages, if necessary.

- An emergency situation resulting from the failure in the water intake pipeline to the Clearwater SFH lead to the transfer of the 2.5 million Chinook salmon to Dworshak NFH. This rescue effort was communicated and supported by the EPA, Corps of Engineers, FWS and NPT. The rearing of all fish totaled 502K pounds for the year which exceeded the 500K maximum for the permit. Although the facility reared an additional 2.5 million Chinook, TSS levels did not exceed the 5 mg/l permit levels.

-The 90% Removal rate for the off-line settling basin was not consistently achieved. Cleaning and sampling methodology were modified to improve upon this; however, the long term solution will likely be addressed through infrastructure modifications and operational changes. This issue is also being evaluated through the Rehabilitation Project.

-On or about April 23, 2013 wastewater treatment media from DNFH washed up on the banks of the Clearwater River in the vicinity of Peck, ID. A debris barrier was installed to prevent further discharge. The media was removed from the facility on or about October 29, 2013.

V. Best Management Practices (BMP) Plan

BMP Plan has been reviewed this year. • ***Yes***

BMP Plan fulfills the requirements set forth in the permit: • ***Yes***

Summarize changes in the BMP Plan since last annual report: Changes in the 2013 BMP have been completed to form the current 2014 BMP. Reducing the total number of rearing ponds by increasing the number of fish in each pond, increasing flow of water to the rearing units, and directing the cleaning waste to the System II and III bio-filters have resulted in changes to BMP. The US Army Corps of Engineers have formed a rehabilitation team charged with renovating the facility to meet the current NPDES permit. The NPT and FWS continue to review and modify fish culture, cleaning operations, and investigate our wastewater treatment and discharge options. Our BMP is a living document.

VI. Land application of solids and/or irrigation with wastewater

Attach Maps of Application Sites. (Note: IDAPA 58.01.02.650 requires IDEQ approval for solids disposal on land.)

Date Location Acreage of Application Solids Applied Cubic Yards or Pounds

Wastewater Applied in Gallons **- Not Applicable**

Yearly Total 0 cubic yards/pounds

Formalin	Pr(ictic Adult Holding 23 days/yr	Maximum of 2 p('167 ppm) 30 gal/1 hr
Formalin	Bath 1 days/yr	Maximum of 1 Burrow's pond 167 ppm 3 gal/0.75 hr for parasites
Formalin	Static Bath 109 days	Maximum of 4 kelt tanks @ 167 ppm discharged to settling pond and or filter beds.(NPT/UI)
AquaShade96	92 days/yr	15-25ppm diluted in formalin 1667ppm and water at 3-4 gpm – Estimated undetectable in discharge (0) used as a visual indicator
Chlorine	4 days/yr ; 176 gallons total	150 gallons (1 day) disinfect reuse system and circulated in clarifiers/Sys I sump estimate no discharge/no flow.
Sodium Thiosulfate	Approx. 1 days- 50 lbs (used to neutralize chlorine in fish hauling truck)	Water treated with sodium thiosulfate to pH 7 then discharged to solid ground away from drains, expect 0 discharge to river
Chloramine T	Total of 6 days 43lbs daily max used to treat for cold water disease	Water treated then discharged to bio-filter beds; expect it to be undetected at discharge pipe as it adheres to solids and breaks down in basin prior to discharge
Virkon	Used est. 365 days/yr; Solution mixed approx. 14 day/yr 15 gallon vats; recorded 12 .4 lbs/year	0 discharge to river used as a spray on to disinfect nets, brushes, pond scrubber, foot baths, waders (Max concentration 10,000 ppm)
Sodium Chloride	Recorded 3 days of use total 5600 lbs	Maximum of 2600 lbs/day of salt used as treatment for stress reduction and parasites as bath treatments (0.1% soln).
Sodium Bicarbonate	Total of 300 lbs/yr	Used as a buffer for carbon dioxide anesthetic in adult fish handling. Max 60 lbs per day; estimate it is undetected in

		discharge due to dilution
Florfenicol (feed)	28 days	Maximum used 158 lbs/day (2700 lbs total/month) Estimate max 3000 ppm if not eaten is discharged settling pond as waste.
Oxygen	Est.13 days	1.5 L/min 150 ppm estimate no detection in effluent
Argentine	Est 19 days	Used as a spray on to disinfect nursery tanks equipment. Expect undetectable discharge to river via clarifiers (system I) from nursery; and diluted in flow through water.
Ovadine (Iodophor disinfection bath)	Est 19 days	100 mg/L per female (max 160 females/day) And used at 200 ppm (bath) to disinfect equipment (100 % discharge to river); And used at 200 ppm (bath) to disinfect equipment (100 % discharge to river);
Ovaplant (sGnRha)	1 days/year; fish generally spawn or are culled within 3 weeks of injection.	Max total 5400 μ used in one day. Estimate 0 effluent discharged to river; carcasses taken to transfer station.
Erythromycin (injection)	Estimated 16 days/yr 21 days prior to spawning	Estimated 1,150 ml injected; Estimate no detection in effluent discharged to river and carcasses taken to transfer station for disposal.
AQUI-S 20E	recorded 9 days; total of 1.61 gallons	Used under Nez Perce Tribe's INAD-monitor Andrew Pierce
Tri-sodium phosphate	1 day	Used to degrease raceways prior to painting. No discharge.
MS-222	~13 days/yr	Estimate 100 ppm (800 gal vats) discharge
CO_2	~13 days/yr (88 hrs)	Estimate max 1,000 ppm (800 gal vats) 100 % discharge to river
Propoly Aqua	~24 days/yr	Max of 474 ml/day @ 130 ppm Estimate 100% discharge to river diluted in 800 gal vats

Chemical Logs available upon request (attached to file copy).

Continued from 20[illegible]	FFCA completed in 2011; renovation plans continue completion depends upon funding.	Old r[illegible] system abandoned. Systen[illegible]ed for wastewater treatment; eliminated direct discharge to river.
April 2013	June 2013 collection boom installed; October 2013 media removed	System 2 media discharge prompted its removed from System 2 bio-filter beds
Daily (when in use)	Maintenance Dept. inspects: Water intake screens, pumps, boilers, waste collection and containment structures.	Bank B of chinook raceways resurfaced to get optimal cleaning and waste removal.
Monthly (when in use)	Continue working on discharge monitoring and NOV issues.	Production Dept. visually inspects: rearing units, screens, weirs, automatic feeders, chemical storage units, water flow.
Annually (prior to use)	October through December	Pumps, boilers, aeration chambers, digesters, settling ponds.

XI. Signature & Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure the qualified personnel properly gather and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature: [signature]

Title/Company: Department of the Interior
U.S. Fish and Wildlife Service
Dworshak National Fish Hatchery

Print Name: Steve Rodgers

Date: 1/16/14

Gebhardt, Chris

From: Mark Drobish [mark_drobish@fws.gov]
Sent: Friday, January 17, 2014 10:05 AM
To: Gebhardt, Chris
Cc: nathan_wiese@fws.gov; Steven Rodgers; Kent Hills; Greg Parker; Don E. redman; Ann Setter; Becky Johnson; Ken Fone; Helder, Dirk; jill_olson@fws.gov; Steve Yundt; Mark Drobish
Subject: 2013 Annual EPA Aquaculture Report attached
Attachments: 2013 Annual EPA Aquaculture Report (16Jan14).pdf

Chris,

The attached file is the 2013 Annual EPA Aquaculture Report. You should receive a hard copy that went out in yesterday's mail. Feel free to call if you have any questions or if further information is needed. Have a great weekend!

Mark